40 years
1968 - 2008

Docket No.: 233812US0

OBLON SPIVAK

ATTORNEYS AT LAW

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

RE: Application Serial No.: 10/624,590
Applicants: Dirk HEINRICH, et al.
Filing Date: July 23, 2003
For: CONTINUOUS CHROMATE-FREE FLUIDIZED-BED PIPE COATING
Group Art Unit: 1792
Examiner: PADGETT

SIR:

Attached hereto for filing are the following papers:

Appeal Brief

Our online credit card payment in the amount of **$510.00** is being made covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. 15-0030. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time.

Respectfully submitted,

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DOCKET NO: 233812US0

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF	:
DIRK HEINRICH, ET AL.	: EXAMINER: PADGETT
SERIAL NO: 10/624,590	:
FILED: JULY 23, 2003	: GROUP ART UNIT: 1762
FOR: CONTINUOUS CHROMATE-FREE FLUIDIZED-BED PIPE COATING	:

APPEAL BRIEF

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313
SIR:

This brief is submitted in response to the final rejection dated June 5, 2007.

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REAL PARTY OF INTEREST

The real party of interest is Evonik, Industries, formerly Degussa AG of Germany.

RELATED APPEALS AND INTERFERENCES

To the best of Appellants' knowledge, there are no other appeals or interferences which will directly affect or be directly affected by, or have a bearing on, the Board's decision in this appeal.

STATUS OF CLAIMS

Claims 1-7, 10, 11, 15-17, 19 and 21-22 are active in this application.

Claim 21 remains withdrawn.

Claims 1-7, 10, 11, 15-17, 19 and 22 are appealed herein.

STATUS OF AMENDMENTS

In the amendment filed after final rejection, Claims 1 and 15 were amended to correct simple typographical errors. In addition, a space was added between Hz and before in Claim 15.

Allegedly those amendments raised new issues requiring further search and consideration and as such were not entered (Advisory Action of November 20, 2007).

The claims as filed prior to the unentered amendment are appealed herein.

SUMMARY OF CLAIMED SUBJECT MATTER

Independent Claim 1 is reproduced below with parentheses indicating page and line number for exemplary discussion in the specification:

A process for chromate-free outer coating of a piper with a fluidized bed and a pulverulent fusible polymer as a coating material, **[pp. 3, lines 5-7]; [pp. 1, lines 6-7]; [pp. 4, lines 10-18, original Claim 1]** the process comprising

cleaning the pipe with a pretreatment system, **[pp. 2, line 28]**

applying a primer to the pipe, **[pp. 2, line 30]**

baking the primer with an induction coil at a frequency of from 2,000 to 10,000 Hz, **pp. 3, line 1-2; pp. 5, lines 3-10]**

coating the pipe with a coating material in a fluidized-bed coating basin comprising an induction coil incorporated in said fluidized-bed coating basin, an air flush system positioned above the pipe to eliminate powder accumulation and one or more metal flow-guide panels positioned below the pipe to eliminate powder deficit and resultant pores on the underside of the pipe, **[pp. 3, lines 5-7]**

wherein the coating material comprising one or more pulverulent fusible polymers to form a coated pipe having a polymer coating, **[pp. 4, lines 10-18, original Claim 1]**

melting the polymer coating by heating with an induction coil at a frequency of from 2,000 to 10,000 Hz to form a pipe having a melt coating, and cooling to form a pipe having a hardened coating, and **[pp. 3, lines 21-27]**

wherein the pipe is not treated with chromate **[pp. 1, lines 6-7]**.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The sole rejection to be reviewed on appeal is whether Claims 1-7, 10, 11, 15-17, 19 and 21-22 would have been obvious under the meaning of 35 USC § 103(a) over Questri et al (U.S. patent no. 4,771,523) in view of Winkle et al (U.S. patent no. 5,176,755) or Creps (U.S. patent no. 4,358,887) and further in view of Facer et al (3,560,239) and Kamimura et al (U.S. patent no. 3,616,983). .

There remains rejections under 35 U.S.C. § 112, first and second paragraphs. However, Appellate review of those rejections is not requested at this time.

ARGUMENT

The art cited in the rejection applied under 35 U.S.C. § 103(a) does not (A) teach all of the claimed limitations and (B) when combined teach away from that which is claimed.

Specifically, the art cited does not describe fluidized-bed coating basin ***comprising an induction coil incorporated in said fluidized-bed coating basin, an air flush system positioned above the pipe to eliminate powder accumulation and one or more metal flow-guide panels positioned below the pipe to eliminate powder deficit and resultant pores on the underside of the pipe***. Further, it is submitted that when the art is carefully reviewed, one would not compile the claimed method from what is cited because when one does, something entirely different is achieved.

As described in the application, the invention provides a process which permits the continuous chromium-free coating of pipe. In this process, the coating is achieved by "***a fluidized-bed coating basin comprising an induction coil incorporated in said fluidized-bed coating basin, an air flush system positioned above the pipe to eliminate powder accumulation and one or more metal flow-guide panels positioned below the pipe to eliminate powder deficit and resultant pores on the underside of the pipe***." (see Claim 1). This feature of the claimed process permits the avoidance of powder accumulations above the pipe and shortage of powder underneath the pipe in the tank.

As discussed in the specification on page 3, lines 15-20, a fluidized-bed coating basin including an air-flush system above the pipe for eliminating powder accumulations and metal flow-guide panels below the pipe for eliminating powder deficits and any resultant pores on the underside of the pipe. Pipes having uniform layer thickness, both radially and axially, can be reliably produced when the fluidized-bed coating basin contains such devices.

The claimed process, which utilizes such a fluidized bed apparatus coupled with the chromate free coating and the frequency of induction coil is not described nor suggested by the art cited in the Office Action.

The rejection based on a combination of Questi, Winkle or Creps in view of Facer and Kamimura was maintained for fundamentally the same reasons as outlined in the previous Official Action.

Briefly touching on the cited references, Questi describes coating (with optional chromate treatment) which also cites to the Kamimura patent which the Examiner has taken the view describes providing flow from above and below the fluidized bed base (see the first paragraph on page 5 of the Official Action). The Examiner also relies on the Facer description which provides fans and manifolds, which according to the Examiner would inherently achieve a fluidized-bed coating basin as defined in the claims (see page 7 of the Official Action). Moreover, the Examiner has taken the position that there are no specific details as to what is provided below the pipe and therefore the systems in these prior art documents are the same as the fluidized-bed coating basin concept in the present claims (see page 8 of the Official Action).

The Creps and Winkle patents are primarily cited for the induction frequencies used in the process. Further, Winkle describes an electrostatic method; in contrast, the claimed method achieves application by with the fluidized bed as set forth in Claim 1 of the application. Fig. 2 of Winkle describes the arrangement of spray guns; the internals of the claimed method below the pipe are used to adjust the flow velocity by simple variation of gaps, and those above the pipe are air jets for fluidization. Therefore, this is not relevant to the presence of a fluidized-bed coating basin as set forth in the claims here.

As noted, Questi is simply cited for coating pipes but as conceded by the Office doesn't really teach anything about what is claimed, that's why all of the other art has been cited. Thus, the rejection can be simply analyzed by whether Questi combined with Kamimura teach what is claimed, and more particularly, whether these two publications (along with the others cited) teach "***a fluidized-bed coating basin comprising an induction coil incorporated in said fluidized-bed coating basin, an air flush system positioned above the pipe to eliminate powder accumulation and one or more metal flow-guide panels positioned below the pipe to eliminate powder deficit and resultant pores on the underside of the pipe***." (see Claim 1).

The art does not.

Kamimura describes several embodiments for coating pipes in Figures 5-9. In Figures 5, 6 and 7, air sprays are used and in Figures 8 and 9 fluidized-type bed coating is used. These are different and Kamimura makes it clear that they are different (see col. 3, lines 41-44). In the air spray embodiments the spray guns can be positioned at different positions (pointing downward and upward)--see Figs 5, 6, and 7. In the embodiments where fluidized beds are used (Figures 8 and 9), the "powdery plastics will be blow upwardly and thus fluidized (see col. 4, lines 9-10 for Fig. 8 and col. 4, lines 34-36 for Fig. 9).

Further, Fig. 4 of Kamimura et al. that is above the pipe is an *exhaust pipe, No. 29* (thus extraction). In contrast, the method of employing the fludized bed uses air jets installed above the pipe for selective fluidization in the upper part of the pipe. This is different from Kamimura et al. because in the claimed method the pipe is in full contact with the coating powder, specifically in the ***fluidized-bed coating basin*** (see Claim 1). In the method described Kamimura et al., the coating medium is directed at the pipe by helicoidal radially disposed jets.

Internals above and below the pipe for the purpose of influencing the natural flow direction in a ***fluidized-bed coating basin*** (from bottom to top) in such a way as to avoid the otherwise traditional disadvantages (top: scoop effect; bottom: flow voids/shadows) and to achieve a homogeneous distribution of film thickness are lacking in Kamimura et al.

Thus, if one used the Kamimura's teachings in the Questi process, one would choose between air spray applications **or** fluidized beds and in doing so would not achieve a the ***fluidized-bed coating basin*** as defined in the present claims because, as noted, the fluidized bed is achieved only by upward air flow. In other words, combining the art in the manner outlined in the rejection, one would not achieve what is claimed here.

CONCLUSION

Accordingly, in view of the above remarks and reasons explaining the patentable distinctness of the presently appealed claims over the applied prior art, Appellants request reversal of the final rejection.

Respectfully submitted,

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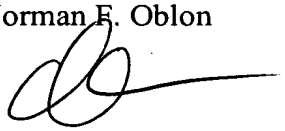

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APPENDIX I: CLAIMS

Claim 1 (Rejected): A process for chromate-free outer coating of a piper with a fluidized bed and a pulverulent fusible polymer as a coating material, the processcomprising

cleaning the pipe with a pretreatment system,

applying a primer to the pipe,

baking the primer with an induction coil at a frequency of from 2,000 to 10,000 Hz,

coating the pipe with a coating material in a fluidized-bed coating basin comprising an induction coil incorporated in said fluidized-bed coating basin, an air flush system positioned above the pipe to eliminate powder accumulation and one or more metal flow-guide panels positioned below the pipe to eliminate powder deficit and resultant pores on the underside of the pipe,

wherein the coating material comprising one or more pulverulent fusible polymers to form a coated pipe having a polymer coating,

melting the polymer coating by heating with an induction coil at a frequency of from 2,000 to 10,000 Hz to form a pipe having a melt coating, and cooling to form a pipe having a hardened coating, and

wherein the pipe is not treated with chromate.

Claim 2 (Rejected): The process as claimed in claim 1, wherein the coating material comprises a polyamide.

Claim 3 (Rejected): The process as claimed in claim 1, wherein the coating material comprises at least one of nylon-11 or nylon-12.

Claim 4 (Rejected): The process as claimed in claim 1, wherein the coating material comprises nylon-12 in the form of a precipitated powder.

Claim *5* (Rejected): The process as claimed in claim 1, wherein the hardened coating has a thickness of from 50 to 1,000 μm and a mean deviation of thickness does not exceed 30%.

Claim 6 (Rejected): The process as claimed in claim 1, wherein the hardened coating has a thickness of from 50 to 300 μm and a mean deviation of thickness does not exceed 30%.

Claim 7 (Rejected): The process as claimed in claim 1, wherein the hardened coating has a thickness of from 50 to 300 μm and a mean deviation of thickness does not exceed 20%.

Claims 8 and 9 (Cancelled)

Claim 10 (Rejected): The process as claimed in claim 1, wherein the primer comprises a solvent, and baking comprises evaporating the solvent.

Claim 11 (Rejected): The process as claimed in claim 10, further comprising dissipating the evaporated solvent with a radial fan.

Claims 12- 14 (Cancelled).

Claim 15 (Rejected): The process as claimed in claim 1, further comprising

smoothing the coated pipe having a polymer coating by heating with an induction coil at a frequency of from 2,000 Hz before melting the polymer coating.

Claim 16 (Rejected): The process as claimed in claim 1, further comprising applying an adhesion promoter to the pipe, where the adhesion promoter is in the form of a suspension, a solution or a powder.

Claim 17 (Rejected): The process as claimed in claim 1, wherein the cooling to form a pipe having a hardened coating comprises pre-cooling the pipe having a melt coating with an air flush system then cooling with water to form the pipe having a hardened coating.

Claim 18 (Cancelled):

Claim 19 (Rejected): The process as claimed in claim 1, wherein only the external surface of the pipe is coated.

Claim 20 (Cancelled)

Claim 21 (Withdrawn):

Claim 22 (Rejected) The process as claimed in claim 1, wherein after the primer is baked and before the pipe is coated, the process further comprises preheating the pipe with an induction coil at a frequency of from 2,000 to 10,000 Hz.

APPENDIX II: EVIDENCE

None.

APPENDIX III: RELATED PROCEEDINGS

None.